SONY

4-650-837-**11**(1)

CD-R/RW Drive

User's Guide

CRX10U

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Safety Regulations

WARNING - For the customers in U.S.A.:

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

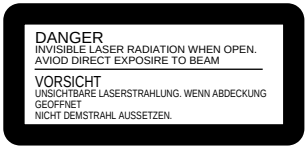
WARNING:

To prevent fire or shock hazard, do not expose the unit to rain or moisture.
To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

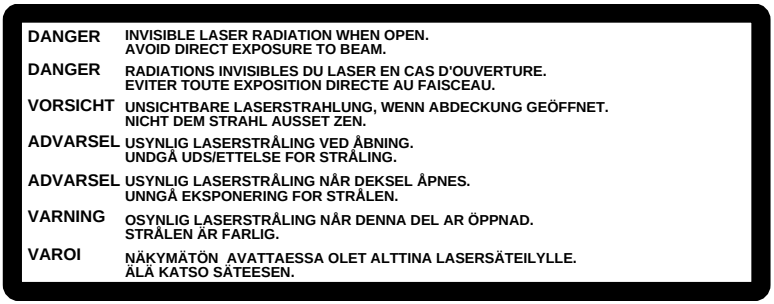
CAUTION:

As the laser beam in this CRX10U is harmful to the eyes, do not attempt to disassemble the cabinet. Refer servicing to qualified personnel only.
The use of optical instruments with this product will increase eye hazard.
The use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This label is located on the inside surface of top cover.
Dieses Etikett befindet sich auf der Innenseite der oberen Abdeckung.

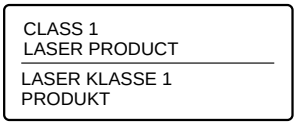


This label is located on the surface of inner bottom shield plate.


DANGER INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
DANGER RADIATIONS INVISIBLES DU LASER EN CAS D'OUVERTURE. EVITER TOUTE EXPOSITION DIRECTE AU FAISCEAU.
VORSICHT UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSET ZEN.
ADVARSEL USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDS/ETTELSE FOR STRÅLING.
ADVARSEL USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VARNING OSYNLIG LASERSTRÅLING NÄR DENNA DEL AR ÖPPNAD. STRÅLEN ÄR FARLIG.
VAROI NÄKYMÄTÖN AVATTAESSA OLET ALTTINA LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEN.

This CD-R/RW drive unit is classified as a CLASS 1 LASER PRODUCT.
The CLASS 1 LASER PRODUCT label is located on the bottom cover.

Bei diesem CD-R/RW-Laufwerk handelt es sich um ein Laser-Produkt der Klasse 1. Das Etikett mit der Aufschrift LASER KLASSE 1 PRODUKT befindet sich auf der Oberseite des Gehäses.



LOUKAN 1 LASERLAITE

KLASS 1 LASER APPARAT

FCC Compliance:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

If you have any questions about this product, you may call the Sony Customer Information Service Center at (800) 588- 3847 or visit the Sony web site http://www.sony.com/storagesupport.

Declaration of Conformity

Trade Name:	SONY
Model No.:	CRX10U
Responsible Party:	Sony Electronics Inc.
Address:	1 Sony Drive, Park Ridge, NJ. 07656 USA
Telephone No.:	201-930-6972

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

CE Sicherheitsbestimmungen

Diese Ausrüstung erfüllt die Europäischen EMC-Bestimmungen für die Verwendung in folgender / folgenden Umgebung(en):

• Wohngegenden
• Gewerbegebiete
• Leichtindustriegebiete

(Diese Ausführung erfüllt die Bestimmungen der Norm EN55022, Klasse B.)

CAUTION:

Danger of explosion if battery is incorrectly replaced.
Replace only with the specified battery pack below.

• Rechargeable Battery Pack : NP-F550

Disposal of Lithium Ion Battery:

You can return your unwanted lithium ion batteries to your nearest Sony Service Center.
For the Sony Service Center nearest you call
1-800-222-SONY (United States only)
Note: In some areas the disposal of lithium ion batteries in household or business trash may prohibited.

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- Macintosh and MacOS are trademarks of Apple Computer Corporation
- Other system and product names used herein are registered trademarks or trademarks of their respective manufacturers, although the™ and ®marks are not used in the text.

Before using this device, be sure to read the end users license agreements for the software provided with your computer.

- ❑ Our product guarantee is valid only when the supplied accessories (including software) are used in the specified or recommended system environment, in accordance with this Users Guide, and applies only to this CD-R/RW drive. Our customer service and user support apply only under these product guarantee conditions.
- ❑ Please note that we cannot accept responsibility for failure of the computer or other devices, incompatibility with special hardware, operating problems caused by improper installation of software, loss of data, discs or other accidental or incidental damage that might occur when using this product.
- ❑ The guarantee and user support for this product are valid only within the countries or sales regions specified on the warranty card.
- ❑ Copyright laws prohibit the copying of all or part of the supplied software and Users Guide, or loaning the software, without obtaining permission of the copyright holder.
- ❑ We cannot accept responsibility for any direct or indirect financial damage or loss of profit that might occur when using the supplied software.
- ❑ Specifications of the supplied software may be changed without notice in the interest in product improvement.

Introduction

The CRX10U has the following features:

- ❑ Writes CD-R discs at up to 4× speed.
- ❑ Writes CD-RW discs at up to 4× speed.
- ❑ Reads CD-ROM discs at up to 6× speed.
- ❑ Has a compact, lightweight design for portability.
- ❑ Includes an AC adapter compatible with power supply voltages from 100 to 240 V.
- ❑ Includes a USB interface for easy connection and removal from the computer.
- ❑ Includes a rechargeable battery pack for convenient use in places without electric power.
- ❑ Plays music CDs and MP3 files as a stand-alone player, using the supplied remote-controlled headphones.

System Configuration Requirements

The CRX10U can be used with a computer with the following specifications:

For Windows®

- ❑ CPU: At least 200-MHz Pentium® (233 MHz or faster recommended)
- ❑ RAM: At least 32 MB
- ❑ Hard disk space: At least 100 MB (1 GB or more recommended)
- ❑ An available USB connector on the computer
- ❑ 3.5" floppy disk drive (used for setup)
- ❑ OS: Microsoft Windows 98[1)], Windows 2000 Professional or Windows Me

  1) Either Windows 98 with Service Pack 1 installed, or Windows Second Edition

Continued

For Macintosh®

- ❑ Models: iMac, iBook, PowerBook G3, PowerMacintosh G3/G4/G4 Cube
- ❑ An available USB connector on the computer
- ❑ CD-ROM or DVD drive (used for setup)
- ❑ OS: Mac OS® 8.6 to 9.0.4 (9.0.4 recommended)

Note

If using MacOS 9, 9.0.2 or 9.0.3, we recommend upgrading to MacOS 9.0.4, which includes USB connection software enhancements to improve stability.
The MacOS 9.0.4 upgrade is available from the following Apple website:
http://asu.info.apple.com/

CAUTION

The System Configuration Requirements listed above are estimates based on the requirements for writing to CD-R and CD-RW discs. When using the CRX10U, In addition to these requirements, those specified by the particular writing software must also be satisfied (and those requirements may be greater than the requirements listed here).

Compatible Discs

The following chart lists the types of discs that can be used with the CRX10U.

Disc Type	Symbol
CD-R	
CD-RW	
CD-ROM	
Music CD	
CD Extra	
Video CD	
CD TEXT	
CD Graphics	
Photo CD	
CD-I	
Electronic Book	

CAUTION

Use only round discs in the CRX10U. Using discs of other shapes (stars, hearts, etc.) could damage the drive.

Continued

About CD-R and CD-RW Discs

The CRX10U can write CD-R discs and CD-RW discs when used with appropriate disc writing software. To play or read a disc written using the CRX10U on another CD-ROM drive, certain settings must be made in the writer software.

What is a CD-R Disc?

CD-R (CD-Recordable) discs can be written only once, and cannot be erased. Music CDs created using CD-R discs can be played on common CD players.

What is a CD-RW Disc?

CD-RW (CD-ReWritable) discs can be written and erased repeatedly. A typical CD-RW disc can be rewritten about a thousand times.

Disc Compatibility

Data stored on CD-R and CD-RW discs using the CRX10U can be retrieved by many CD-ROM drives. However, some older models designed specifically for CD-ROM discs cannot read CD-RW discs. Also, music CD-R discs written with the CRX10U can be played on most CD players, although some models (particularly automobile CD players) are not guaranteed to be capable of playing CD-R discs. Please also note that differences in quality and performance characteristics among different manufacturers of CD-ROM drives, CD-R and CD-RW discs may result in some drives being unable to play certain types of discs.

Applications for CD-R and CD-RW Discs

The applications for which CD-R and CD-RW discs are best suited are generally as follows. These should be considered as general guidelines.

	CD-R	CD-RW
Creating Music CDs	○	
Data Distribution	○	
Backup		○
Data Storage	○	
Creating Originals (Mastering)	○	○
Temporary File Storage		○

Writing Speeds

The writing speed for a CD-R or CD-RW disc should be set so that it does not exceed the speed specified for the particular disc media. You can set the writing speed in the writer software.

Recommended Discs

We recommend using Sony discs with the CRX10U.
CD-R: Sony 650 MB and 700 MB CD Recordable discs
CD-RW: Sony 650 MB CD ReWritable discs

For trouble-free 4× CD-RW recording, make sure the CD-RW media supports 4× or faster recording speed.

CAUTION

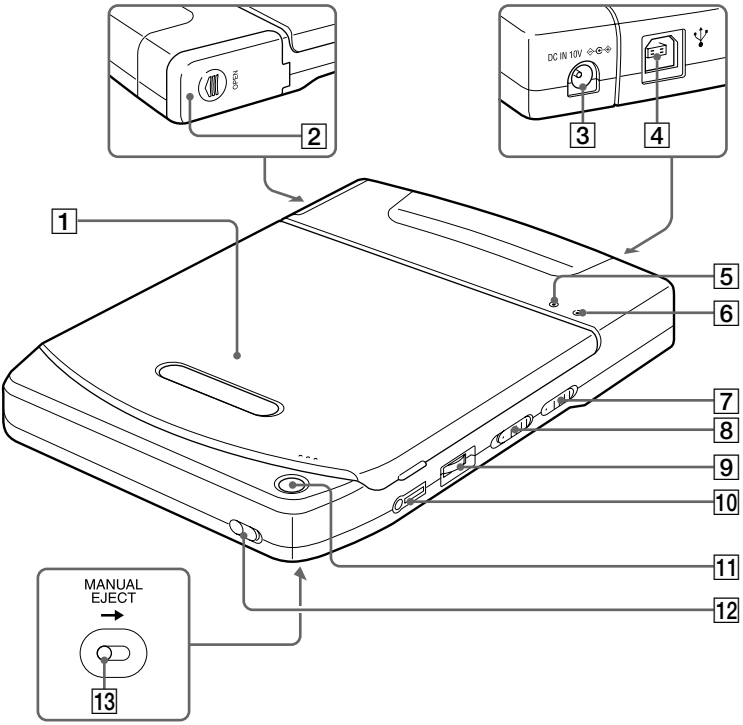
- The CRX10U is not capable of writing high-speed CD-RW discs. However, high-speed CD-RW discs that have been properly written using a high-speed CD-RW drive can be read by the CRX10U.
- The CRX10U cannot be used to write 99 minute discs or 8 cm CD-R discs.

Recording Methods

The CRX10U is capable of writing CD-R/CD-RW discs using several different formats. The writing format is determined by the writer software according to the type or application of the disc being created. Data can usually be written to CD-R and CD-RW discs using the standard settings of the writer software, with no need for concern about the writing format. The writing methods supported by the CRX10U are briefly described here. Refer to the manual for the writer software you are using for more details.

- Disc at Once: this recording method writes the entire disc in a single operation. Data cannot be added later.
- Session at Once: a complete session is written in a single operation (one at a time). Data can be added in later sessions.
- Track at Once: tracks are written to the disc incrementally (one at a time). Data can be added in later tracks.
- Packet Writing: data is written in file and folder units, instead of track or session units. This allows writing as simply as drag-and-drop copying of files or folders.

Names and Functions of Parts



1 Top Cover

2 Battery Compartment (on rear)

3 Power Jack (on rear)
Connect the supplied AC-CRX10U AC adapter here.

CAUTION

Never connect any AC adapter or power cord other than those provided.

4 USB Connector (on rear)
Connect the supplied USB cable here.

5 Power Indicator
When power is on, the power status is indicated as follows.

If connected to AC power
- The indicator lights green.

If operating from the battery
- The indicator usually lights green.
- When the remaining battery capacity falls below 25%, the indicator lights red.
- When the remaining battery capacity falls below 5%, the indicator flashes red.

6 **BUSY Indicator**
This indicator lights orange while the drive is operating.

7 **AVLS (Auto Volume Limiter System) Switch**
When listening to music CDs, this switch can be set to the LIMIT position to protect against excessive volume levels and suppress sound leakage, pressure on the eardrums and other hazards to hearing.

8 **POWER Switch**
This switch turns the drive on and off, and turns battery charging (CHG) on.

9 **Volume Control**
This control adjusts the volume at the headphone jack.

10 **🎧/REMOTE Jack**
The RM-CRX10 headphone remote control connects here.

11 **Eject Button**
Press this button to open the top cover.

Important

The CRX10U has an electronic eject mechanism to prevent the top cover from being opened accidentally while the drive is operating, so the eject button cannot open the top cover when the drive is turned off. Furthermore, even when the power is on, depending on the status of the currently running application, the top cover might not open for a few seconds after the eject button is pressed.
If pressing the eject button does not open the top cover (when not writing a disc), press the manual eject lever (on the bottom of the drive) in the direction indicated by the arrow to open the top cover.

12 **HOLD (inhibit inadvertent operation) switch**
Slide this switch in the direction of the arrow to enable the Hold state, which prevents the top cover from opening when the eject button is pressed.

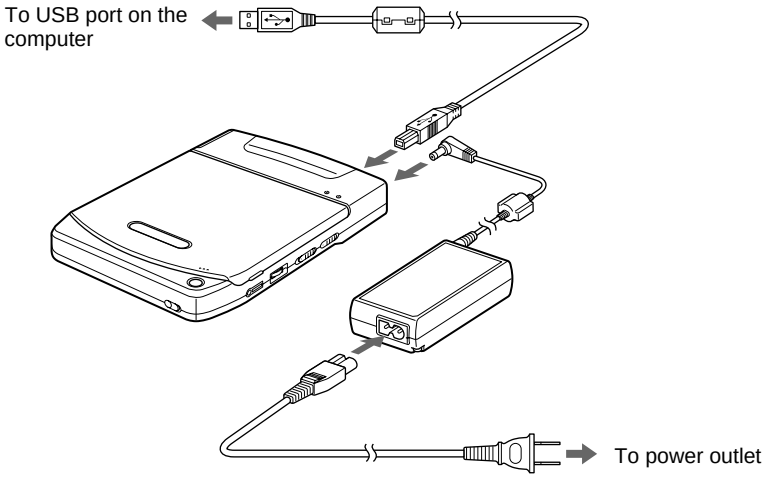
13 **Manual Eject Lever (bottom of drive)**
While the drive is off, push this lever in the direction of the arrow to open the top cover.

Connecting the Drive to a Computer

Connect the drive to a computer as shown below.

CAUTION

- Be sure to read the Quick Start Guide before connecting the CRX10U to the computer the first time.
- Use only the supplied AC adapter, power cord, and USB cable for connections.



Precautions for USB Connections

- Connect the CRX10U directly to a USB port on the computer. Operation through a hub (including keyboard hubs) cannot be guaranteed.
- With Windows Me and Windows 2000, we recommend clicking on the task bar and allowing the CRX10U to stop before removing the USB cable. Otherwise, a warning message will be displayed when the USB cable is removed.

Using the Battery Pack

The supplied battery pack can be used to operate the CRX10U without connecting AC power, for convenient portable music CD listening.

Important

We recommend operating the drive from AC using the AC adapter when writing CD-R/RW discs. If the battery was to be discharged while writing data, the write operation would fail and the disc would probably be unusable.

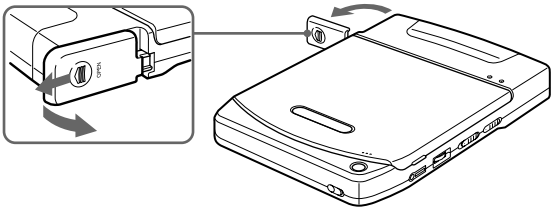
Note

When operating the CRX10U from the battery, the drive will turn itself off automatically if no key is pressed on the remote control for one hour (unless playing a music CD). Use the POWER switch to turn the CRX10U off and back on.

Installing the Battery Pack

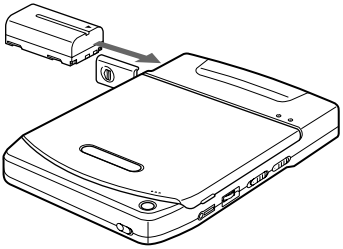
Install the supplied battery pack in the CRX10U. The battery pack is charged when it is installed.

1 Open the battery compartment cover.
Slide the cover in the direction indicated by the ◀II mark.



Continued

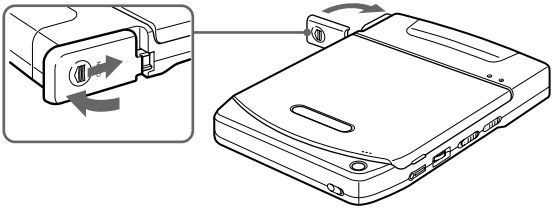
2 Insert the battery pack.
Insert the battery pack in the direction indicated by the B arrow on the pack. The battery pack will stick out slightly from the drive.



CAUTION

Use only the supplied NP-F550 Battery Pack.

3 Close the battery compartment cover.
Place the cover over the opening, and slide it until it clicks.



Charging

Charge the battery pack before using it the first time, and whenever it becomes discharged.

Note

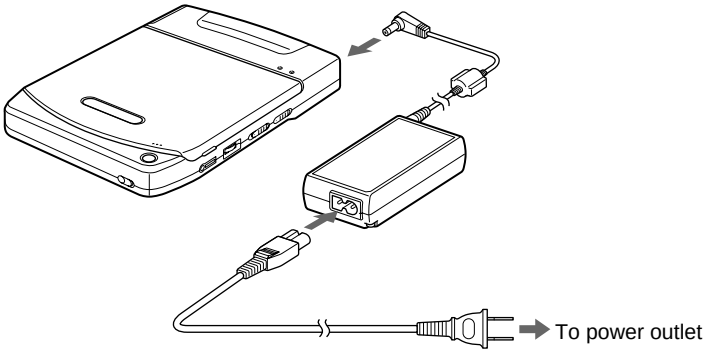
- When the remote control is connected to the CRX10U, the battery's discharge status can be displayed as follows:

(Full Charge) (Discharged)

- The power indicator also indicates the battery's discharge status. When less than 25% charge remains, the indicator lights red, and when less than 5% remains, the indicator flashes red. (Use the discharge status display as a guide to remaining battery charge.)

1 Install the supplied battery pack in the CRX10U.
See “Installing the Battery Pack” on page 15 for details.

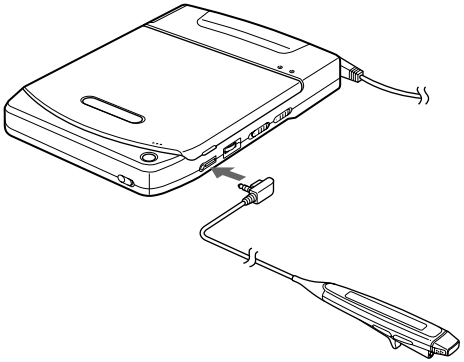
2 Connect the power cord to the AC adapter and to a power outlet.



CAUTION

Use only the supplied AC-CRX10U AC adapter and power cord.

3 Connect the remote control.

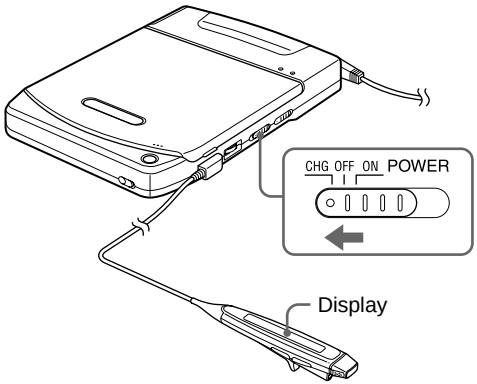


Continued

4 Set the POWER switch to CHG.
The display window of the remote control and the indicators display as follows while charging:

	Remote Control Display	POWER Indicator
Charging	CHARGE[1]/	Flashes orange/green
	↓	↓
	CHARGE[1]/	Flashes orange/green
	↓	↓
	CHARGE[1]/	Flashes orange/green
	↓	↓
	CHARGE[1]/	Flashes orange/green
Fully charged for use	FULL/	Flashes or off [2]

1) "CHARGE" and the approximate remaining charge time appear alternately. The remaining charge time is displayed with a minus sign.
Example: -0:46 indicates the battery will be fully charged in about 46 minutes.
2) The POWER indicator turns off about one hour after appears on the remote controller display. When the POWER indicator turns off, the battery is fully charged.



CAUTION

The battery does not charge when the POWER switch is on: it must be set to CHG.

Note

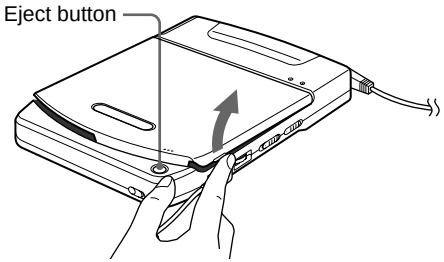
A fully discharged battery pack requires four to five hours to completely recharge.

5 When charging is finished, turn the POWER switch off and disconnect the AC adapter.

Loading and Ejecting Discs

Loading a Disc

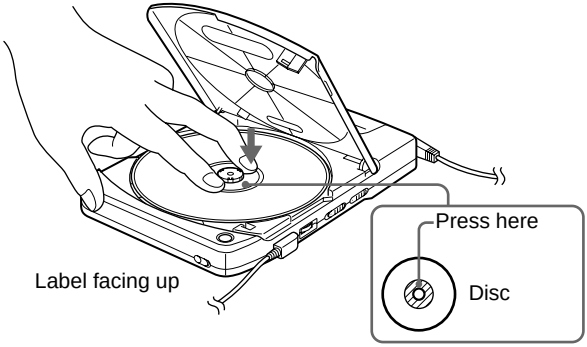
1 Press the eject button to open the top cover.
The top cover opens slightly by itself. Lift it all of the way open manually.



CAUTION

The top cover does not open if the HOLD switch is in the HOLD position.

2 Load a disc.
Push the center of the disc until it clicks into place. Do not press too hard, and be careful not to touch the lens in the drive.



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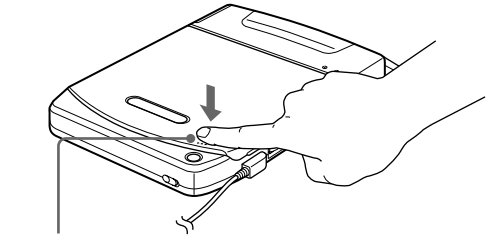
3 Close the top cover.
You can now access the data on the disc.

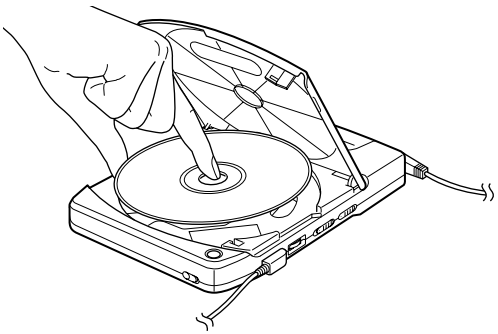


Press here firmly to close.

Ejecting a Disc

1 Press the eject button to open the top cover.
The top cover opens slightly by itself. Lift it all of the way open manually.

2 Remove the disc.
Hold one finger against the edge of the disc from the side of the CRX10U, and press another finger against the protrusion in the center of the drive to remove the disc.



CAUTION

- Make sure the disc has stopped spinning before removing it. This is especially important with 8-cm discs, since they do not stop spinning immediately when the top cover is opened.
- Do not open the top cover while the BUSY indicator is orange. Doing so may cause the computer to freeze up.
- The top cover does not open if the HOLD switch is in the HOLD position.

Listening to Music CDs

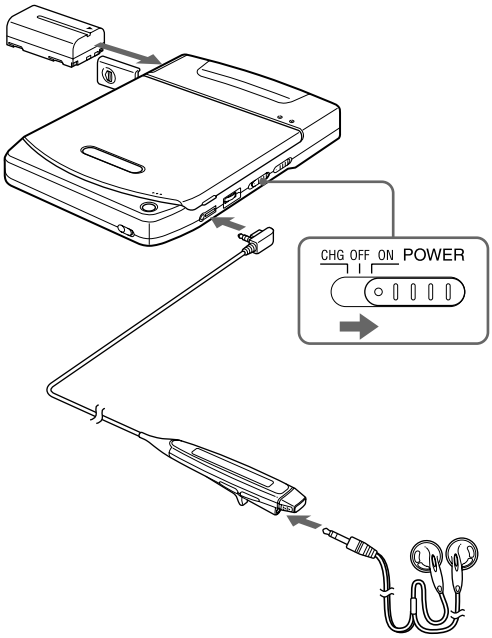
To listen to a music CD with the CRX10U, connect the headphone with remote control, and operate from the remote control. With the supplied battery pack, you can listen to music CDs without connecting the CRX10U to the AC adapter or a computer, for convenient outdoor listening.

CAUTION

- The CRX10U is not equipped with buffer memory storage or similar shock protection for playing back music CDs. Therefore, you may experience breaks in sound if you use the CRX10U to play music while subjecting it to strong vibration, such as while walking or riding on a moving vehicle.
- When connected to some Macintosh models, music CDs may not play well in the CRX10U. Also, the music cannot be played on the Macintosh speakers. Please use the headphone jack on the CRX10U. (We recommend using the CD-ROM or DVD drive on the Macintosh for playing music CDs).

Playing CDs

1 Install a charged battery pack, connect the remote control and headphones, and turn on the POWER switch.
The headphones plug into the remote controller.



Continued

Note

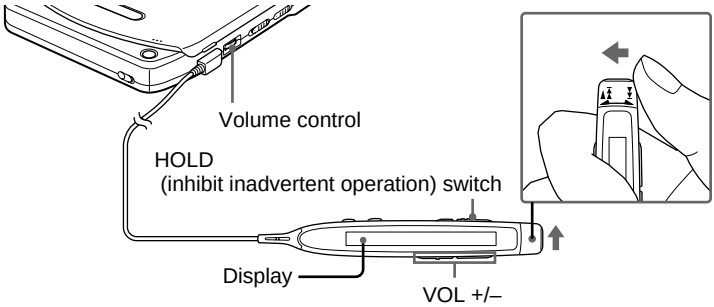
- See “Using the Battery Pack” on page 15 for details about installing and charging the battery pack.
- To operate from AC power, connect the CRX10U to the AC adapter, and the adapter to an outlet.

CAUTION

- Use only the supplied AC-CRX10U AC adapter and power cord.
- Use only the supplied NP-F550 battery pack.

2 Load a disc (music CD).
See “Loading a Disc” on page 19 for details.

3 Move the remote control knob to the ► • ►►I side.
Playing starts with a confirming beep in the headphones.



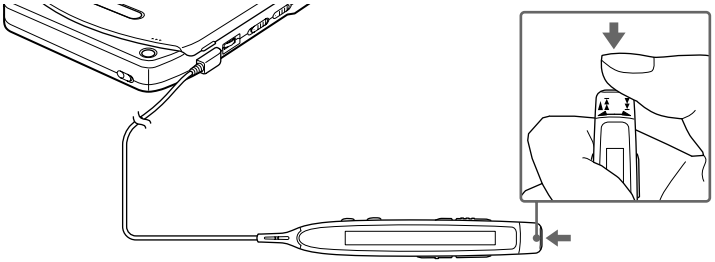
To adjust the volume:

Press VOL +/–. The volume level appears on the remote control display during adjustment.

Note

- Headphone volume can also be adjusted by the volume control on the drive, so you can adjust volume using both the VOL +/– control on the remote control and the control on the drive.
- Sliding the HOLD switch on the remote control in the direction of the arrow disables the other controls, to prevent accidental operation.

4 Press ■ to stop playing.

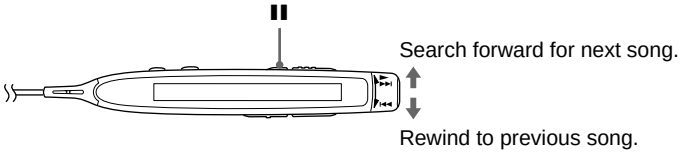


Play stops after a confirming beep in the headphones.

5 Eject the disc when desired.
See “Ejecting a Disc” on page 20 for details. If you are not going to use the CRX10U for a long time, disconnect the cables.

Search & Fast Forward

While playing a music CD, you can pause, search, fast forward and rewind as follows.



While playing...	Operation	Confirming Sound
Pause	Press ❚❚	Slow repeating beeps
Resume	Press ❚❚	One beep
Rewind to start of song	Press the knob to the ⏮ side	Three quick beeps
Fast forward to next song	Press the knob to the ▶ • ⏭ side	Two quick beeps
Rewind while playing[1)]	Hold the knob toward the ⏮ side	No sound
Fast forward while playing[1)]	Hold the knob toward the ▶ • ⏭ side	No sound

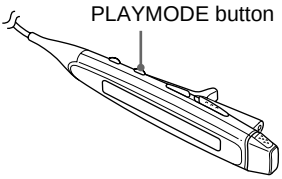
1) Pausing and then holding the knob toward the ⏮ or ▶ • ⏭ side rewinds or fast forwards, respectively, at high speed without playing any sound.

Continued

Continuous Play (Repeat)

Three types of continuous play are available: replay the whole disc, repeat one song, or shuffle.

1 Press the PLAYMODE button on the remote control while playing or stopped, to display the play mode.



Each time you press PLAYMODE, the display changes as follows.

Display	Play Mode
None	Normal play
↻	Repeat all songs on the disc (repeat playing all songs)
↻1	Repeat one song (repeat the song now playing)
↻SHUF	Shuffle Repeat (repeat playing all songs randomly)

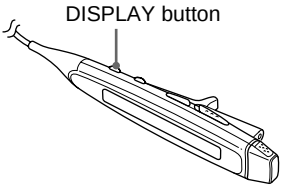
Displaying Song Title and Remaining Time

When CD TEXT is played, the song title and disc name can be displayed while playing.
When a standard music CD is played, the remaining or elapsed play time can be displayed.

Note

- CD TEXT consists of text information such as song titles and disc names written on a music CD along with the music.
- Refer to “Playing Discs with MP3 Files” on page 26 for a description of the information displayed while playing MP3 discs.

1 Press the DISPLAY button on the remote control while playing.



Each time you press the button, the display changes as follows.

• For CD TEXT discs

Left Side	Right Side
Song No.	Elapsed play time for song
Song No.	Song title and artist name
Songs Remaining	Album title and artist name

• For standard music CDs

Left Side	Right Side
Song No.	Elapsed play time for song
Song No.	Remaining play time for song
Songs Remaining	Remaining play time for disc

Note

- Text that is too long to fit on the display is scrolled.
- Letters, numbers and symbols can be displayed. Double-byte characters cannot be displayed.
- Unsupported text information may not display correctly.

Continued

Playing Discs with MP3 Files

Discs consisting of MP3 files (or MP3 discs) can be played by the CRX10U in the same way as standard music CDs.

MP3 Files

MP3 is a compression standard used by computers to handle music data. Music compressed with the MP3 format is stored in MP3 files. One major advantage of MP3 is its high rate of compression. Files in MP3 format are about one tenth of the size of the equivalent WAV format sound files commonly used with Windows. For example, the 650 MB content of a standard music CD compresses to about 65 MB as an MP3 file, while maintaining sound quality equivalent to the music CD, allowing great savings of disc space.

Playing MP3 Discs

Operations for playing MP3 discs on the CRX10U are the same as for standard music CDs. See pages 21 to 25 for details as needed. However, the items displayed on the remote control are different from those displayed with standard music CDs. When playing MP3 discs, the remote control display changes as follows each time you press the DISPLAY button.

• When MP3 files being played include ID3 tags (title, artist name, and album title information)

Left Side	Right Side
Song No.	Song play progress time[1)]
Song No.	Song title and artist name
Songs Remaining	Album title and artist name

1) The song title is displayed immediately after the song starts playing.

• When MP3 files being played do not include ID3 tags (title, artist name, and album title information)

Left Side	Right Side
Song No.	Song play progress time[2)]
Song No.	File name (excluding .MP3 extension) / No artist name
Songs Remaining	No album name / No artist name

2) The file name (excluding .MP3 extension) is displayed immediately after the song starts playing.

Note

- Text that is too long to fit on the display is scrolled.
- Letters, numbers and symbols can be displayed.
- Unsupported text information may not display correctly.

Limitations when Playing MP3 Discs

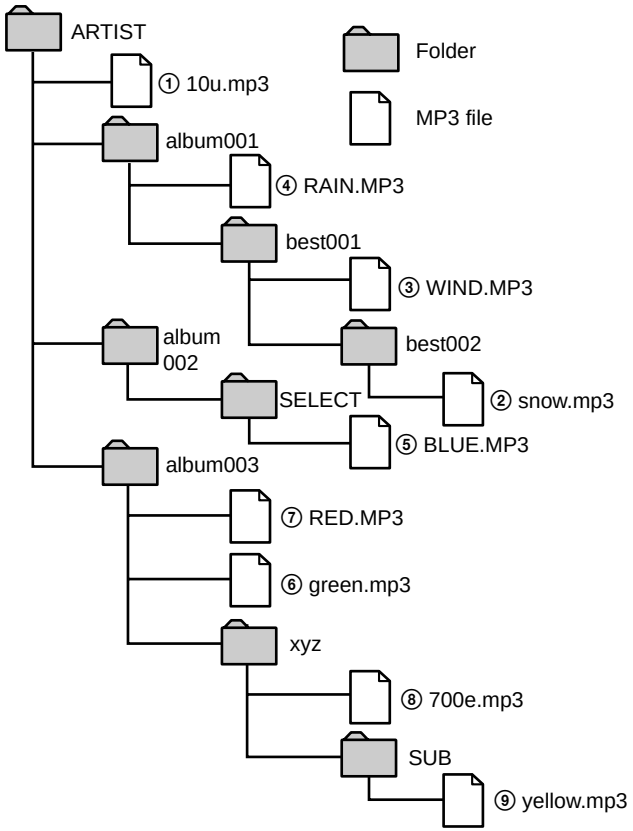
Limitations with playing MP3 discs on the CRX10U alone are as follows (for details about MP3 and related terminology, refer to the Internet or computer-related books).

- Only MP3 discs created in ISO9660 Level 1, Level 2 and Joliet formats are playable. MP3 discs created in CD-UDF format using the Packet Write mode are not playable.
- Discs written by Adaptec DirectCD™ cannot be played, even if the ISO9660 format option is selected.
- Multi-session discs created with up to 45 sessions can be played.
- Up to 32,767 files (songs) can be recognized.
- Forward/rewind to the start of songs can be done with up to 32,767 songs. Shuffle play supports up to 2,048 songs.
- The file extension of MP3 files may be either ".MP3" or ".mp3". MP3 files with other extensions are not playable. Of course, regardless of file extension, a file is not playable if the contents are not in MP3 format.
- Discs with many folder directories or files may have some delay before starting to play, so we recommend limiting the number of recorded files to no more than one or two hundred songs.
- The standard compression bit rate of MP3 files is 128 Kbps. MP3 files with other compression bit rates may have sound drop out or may have their play times displayed incorrectly.
- The remote control display can show only the lowest three digits of the track number (song number). For example, 1000 appears as "000" and 1001 appears as "001."
- The remote control can display the same characters as for standard music CDs: letters, numbers and symbols (up to 64 characters).
- ID3 tag (character data describing the MP3 content) support complies with ID3 versions 1.0 and 1.1.

Continued

Play Order of MP3 Files

The order in which MP3 files are played from an MP3 disc depends on the number of folder levels on the disc and the names of the MP3 files. The priority of folders and file depends on the characters used in their names, with symbols having the highest priority, followed by numerals (0-9) and letters (A-Z). For example, with the MP3 disc hierarchy shown in the figure below, MP3 files are played in the sequence indicated by the numbers ① to ⑨.



Note

One way to determine the order in which files at the same folder level are played is to add numerals to the beginning of the file names.
Example: 01xxx.MP3, 02xxx.MP3

Creating MP3 Files

MP3 files are created using special ripping and encoding programs (not supplied). When creating an MP3 disc with MP3 files, use ISO9660 Level 1, Level 2 or Joliet format.

MP3 Files and Copyrights

Please be careful to respect copyrights when making and using MP3 files. Violating copyrights can result in penalties including compensation for damages. If you are unsure of your responsibilities regarding copyrights, please contact a legal professional.

Troubleshooting

If you are experiencing a problem with the drive, check the following items before contacting us for assistance. If you cannot resolve the problem after checking these items, contact your dealer or our customer service department.
You can also find the latest user support information for the CRX10U on web site. Refer to “Quick Start Guide” for details.

Problem	Cause/Solution
The drive is not recognized by the computer, or it behaves incorrectly or intermittently.	→ The driver may not be properly installed. Try uninstalling and then reinstalling the driver using the procedure in the Quick Start Guide. → The power connector or interface cable may not be properly connected. Verify that the connectors are firmly mated at the drive and the computer ends. Also refer to the Quick Start Guide to confirm that the connections are correct. → If using Windows 98 (except Second Edition or later), verify that Service Pack 1 is installed, and if it is not, install it. Visit the Microsoft web site to obtain the update.
After loading a disc, the audio skips or data cannot be read.	→ The disc may not be inserted with the label side facing up. Discs must be loaded label-side up. → The disc may be incompatible with this drive. Refer to “Compatible Discs” on page 9. → The disc or the drive lens on the drive may be dirty. If the lens is dirty, contact your place of purchase or your nearest repair service provider. → The disc may be scratched. Try a different disc to determine whether the drive is operating normally. → There may be debris on the drive turntable. If so, wipe it clean. → Condensation may have formed in the drive or on the disc. If the disc surface or the drive lens appears to be fogged, remove the disc and wait approximately one hour for the condensation to evaporate.

Problem	Cause/Solution
Cannot remove the disc.	→ When the drive is off, pressing the Eject button does not open the top cover. Turn the drive on, or use the manual eject lever. Refer to “Names and Functions of Parts” on page 12. → If the HOLD (inhibit inadvertent operation) switch on the side of the drive is in the HOLD position, move it to the other position. → While writing is in progress, you cannot remove the disc by pressing the Eject button. Remove the disc by following the instructions for the writer software you are using. Refer to the manual provided with the writer software. → The computer may have hung for some reason. Turn the drive off and back on, and then restart the computer.
Writing fails when writing to CD-R/RW.	→ If the CRX10U is connected to a USB hub (including keyboard hubs), reconnect the drive directly to a USB port on the computer. → Set the write speed setting to 4× if it is not already (the recommended write speed for this drive is 4× for CD-RW and CD-R discs). The write speed setting can be changed through the writer software. → Disable any screen saver that may be running on the computer. → Shut down any software that may be running, other than the writer software. Other software running while writing data can cause the data transfer rate to drop considerably, which can cause the writing process to fail (buffer underrun). → Shut down any resident disc utilities or other utilities that are supposed to speed up disc access. → If “on-the-fly” writing (copying data disc to disc from a CD-ROM drive to the CRX10U) is enabled, disable it. Instead, copy the data to the hard disk first, and then write from the hard disk. On-the-fly writing is affected by many factors, such as CPU speed, memory capacity and transfer speed of the reading drive, so write errors are highly system-dependent.

Continued

Problem	Cause/Solution
Created music CDs are noisy (noise is mixed into the played sound).	→ Refer to the FAQ or troubleshooting sections of the writer software manual to change the writer software settings. → Some computers generate more noise than others, so using a different computer may allow creating noise-free music CDs.
A failure occurs when the computer boots up, or the writer software does not operate properly.	→ If the writer software provided with the CRX10U is installed on a computer with packet writing-based writer software (such as CDRFS) already been installed, the writer software may not operate correctly. The other packet writing software should be uninstalled beforehand. Note that packet writing software comes pre-installed on some computers, so check your system to see if it is present.
Writer software other than the supplied program has been installed, but does not work.	→ Some writer software may be incompatible with the CRX10U. For details, contact the manufacturer or seller of the writer software. → Some versions of writer software may be incompatible with the CRX10U. For details, contact the manufacturer or seller of the writer software. In some cases, the writer software can be upgraded to be compatible with the CRX10U.
Although the drive worked normally in the past, operation became unstable at some point.	→ If operation became unstable after a particular application was installed, uninstall that application. If this resolves the problem, refrain from using or installing that application.

Problem	Cause/Solution
No sound can be heard in the headphones or computer speakers when playing a music CD.	→ The sound output destination is determined by Windows settings. • If using Windows Me or Windows 2000, click the Start button - Settings - Control Panel - System, and select the Device Manager tab. (If using Windows 2000, click the Hardware tab and then the Device Manager button to display the Device Manager window.) To enable CD audio from the computer speakers, click CD-ROM, double click CRX10U, click the Properties tab, and check the “Enable digital CD audio for this CD-ROM device” checkbox. When this box is not checked, the music can be heard in the headphones. • If using Windows 98, click the Start button - Settings - Control Panel - Multimedia, and select the CD Music tab. To enable CD audio from the computer speakers, check the “Enable digital CD audio for this CD-ROM device” checkbox. When this box is not checked, the music can be heard in the headphones. • If using a Macintosh, music CDs cannot be played through the computer speakers, although you can listen with headphones connected to the CRX10U. We recommend using the CD-ROM or DVD-ROM drive in the Macintosh to play music CDs. • Some computers cannot play music from an external drive through their speakers, in which case you can still listen with the headphones.
The battery pack does not charge, or the battery can only be used for a short period of time.	→ The battery does not charge when the POWER switch is on. Be sure to set the switch to CHG. → Battery operation time is shorter at temperatures below 10°C. Use the drive at room temperature (10 to 30°C). Also, charge the battery pack at room temperature. → If battery operation time is severely reduced, the battery pack has probably reached the end of its working life. Please buy a new battery pack.

Operating Precautions

Special Precautions

- **Never use any AC adapter other than the one provided. Using a different adapter could damage the drive.**
- **Never subject the drive to any vibration or physical shock while a write operation is in progress. Errors may occur while writing, rendering the CD-R/RW disc unusable.**
- Avoid bending the interface cable sharply, especially near the connectors. Doing so can damage the cable or cause poor contact.
- The CRX10U is not equipped with buffer memory storage or similar shock protection for playing back music CDs. Therefore, you may experience breaks in sound if you use the CRX10U to play music while subjecting it to strong vibration, such as while walking or riding on a moving vehicle.

Operating and Storage Environments

Do not use or store the drive in a hot or humid location, or where it could be subject to strong vibrations or direct sunlight.

Transporting the Drive

- Save the packing materials for future use. They will be needed if you ever have to ship the drive in the future.
- Before shipping the drive, make sure there is no disc in it.

Condensation

Avoid subjecting the drive to rapid temperature changes. Do not use the drive immediately after moving it from a cold location to a warm location, or after a sudden increase in room temperature. Such circumstances can cause condensation to form inside the drive.
If the temperature changes suddenly while using the drive, stop using it but leave the power on for at least one hour. After waiting at least one hour, turn the drive off.

Lens Considerations

- Do not touch or look directly into the lens inside the top cover. To prevent dust from accumulating on the lens, always keep the top cover closed except when inserting and removing discs.
- If the lens has gotten dirty and the drive no longer operates properly, please contact your place of purchase or your nearest repair service provider.

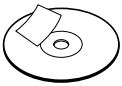
When using the CRX10U abroad

Damage will result if you connect the CRX10U and its AC adapter (the AC-CRX10U) to an electronic transformer such as those sold for international travelers. Do not use such devices. The supplied AC adapter can be used with 50/60 Hz AC voltages ranging from 100 to 240V, allowing it to be used with power outlets used in most hotels and households around the world.

Handling Discs

- Handle discs only by the edges. Do not touch the recording surface of the disc.

- Except where specified by the disc manufacturer or warranty, do not write on or attach labels to discs.



- Do not store discs in a dusty or dirty location, in direct sunlight, near a heater or in a humid location.
- Do not spill liquids on a disc.
- To protect valuable data, always store discs in their cases.
- Gently wipe discs with a soft cloth, from the center straight towards the outer edge.
  If a disc is very dirty, wet the cloth with water, wring it out thoroughly, wipe the disc with the damp cloth and then use a dry cloth to wipe any moisture off of the disc.
  Do not use benzene, record cleaner, anti-static solutions or other liquids, as they can damage the disc.

- Never wipe a CD-R or CD-RW disc with a cleaning solution before recording data on the disc. Use a blower to blow any dust off of the surface of the disc.
- Scratches or dust on the unrecorded portion of a CD-R or CD-RW disc may prevent proper data recording. Handle discs carefully.

Battery Pack Considerations

- The correct battery pack for the CRX10U is the Sony NP-F550. One pack is supplied with the drive, but additional packs can be purchased separately.
- The CRX10U does not support the power management feature of the NP-F550 InfoLithium battery pack.
- Charge the battery pack using the CRX10U with the provided AC adapter (AC-CRX10U).
- The battery pack is partially charged before shipping, but you should charge it completely before use.
- The battery pack gradually discharges itself when not being used, so even after it has been fully charged, we recommend recharging before use (if more than a day or two has passed).
- Charge the battery pack where the surrounding temperature is in the range from 10 to 30°C. This will provide longer battery operation.
- If the battery is not used for a long time, it should be charged and then discharged completely before storage, and once each year to maintain its usability.

Warranty Card & After Sales Service

Warranty Card

- The warranty card should be provided with this product at the time of purchase.
- Please read the terms on the card, fill in any required items and keep it in a safe place.
- The warranty period is one year from the date of purchase.

After Sales Service

If a problem arises,

First check the “Troubleshooting” chapter in this manual.

If the problem persists,

Contact customer service.
See the “Product Support Information” listed in the separate “Quick Start Guide” or the Warranty card.

Repairs Within the Warranty Period

We provide repairs according to the terms stated on the warranty card. Please refer to the card for details.

Repairs Outside of the Warranty Period

If functionality can be restored by repair, we will do so for a charge, as you direct.

Replacement Parts Availability

We retain CD-R/RW drive repair parts (those that may be required to maintain product functionality) for at least six years after model production is discontinued. We consider this parts retention period to be the period during which the drive is repairable. However, depending on the nature of damage, repair may be possible even after this period, so please contact your place of purchase or repair service provider.

Repair Requirements

If the drive needs repair, return it together with all supplied accessories (cables and AC adapter) to your place of purchase or Sony Customer Support Center.

- If you return the drive to your place of purchase or repair service provider because of damage resulting from misuse or other causes, you will be responsible for all repair-related expenses, including shipping and handling and product adjustments.
- The product warranty and user support service are valid only in the countries or sales regions specified on the warranty card.

Major Specifications

Speed

Write speed (CD-R)

2×, 4×

Write speed (CD-RW)

2×, 4×

Read speed

6× maximum

Discs

Compatible disc types

CD-R
CD-RW
CD-ROM
CD-ROM XA
CD-DA
CD Extra (CD+)
Video CD
CD TEXT
Photo CD
(Multisession compatible)
CD-I
CD Bridge
Audio combined CD-ROM
Disc diameter: 12 cm
8 cm (read only)

Writing Methods

Track at once
Disc at once
Session at once
Packet writing

Drive

Data transfer rate

Maximum: 900 KB/s (6×[1])

Access time

Average (random stroke): 160 ms

1) The maximum data transfer rate depends on computer capabilities.

MP3 play format support

MPEG1 Audio Player Level 3
(128 Kbps recommended bit rate)
ID3 Tag Versions 1.0 and 1.1

Operating and Storage Environments

Operating temperature

5 to 35 °C

Operating humidity

20 to 80% RH (non-condensating)

Storage environment

–20 to 50 °C at 20 to 90% RH (non-condensating)

Power Supply, Miscellaneous

Power supply

External power jack: 10 V
Can operate from 100 to 240 VAC using the supplied AC-CRX10U AC adapter.

Power consumption

Approximately 6 W

Size

Approximately 132 × 25 × 189.5 mm (W × H × D)

Weight

Approximately 340 g (drive only)

Continued

Interface

Drive interface

USB 1.1 compliant

Buffer capacity

8 MB

Battery

Battery Pack Model NP-F550
Charging time[2)] Approx. 5 hours
Operating time[3)]
Playing music Approx. 2.5 hours
Writing Approx. 2 hours

2) This is a general indication of the amount of time required to fully charge the battery from the completely discharged condition.
3) Actual charging time and operating time depend on the surrounding temperature and conditions of use.

Main Specifications (NP-F550)

Battery type
Lithium ion storage battery
Maximum voltage : 8.4 VDC
Nominal voltage : 7.2 VDC
Usage temperature : 0 to 40°C
Size : 38.4 × 20.6 × 70.8 mm
Weight : Approximately 95 g

Product specifications and appearance are subject to change without notice.

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